

Claims

1. An extract of *Astragalus membranaceus* (HQ), wherein the extract is selected from the group consisting of: a hexane extract of *Astragalus membranaceus* (HQ); a dichloromethane extract of *Astragalus membranaceus* (HQ); a chloroform extract of *Astragalus membranaceus* (HQ); and a non-aqueous extract of *Astragalus membranaceus* (HQ) provided that the HQ extract is not an ethanol or butanol HQ extract
2. The extract of claim 1, wherein the extract is enriched in steroid/nuclear (s/n) receptors bioactives.
3. The extract of claim 1, wherein the extract is present in a composition.
4. The extract of claim 3, wherein the composition further comprises at least one flavonoid compound.
5. The extract of claim 3, wherein the composition is a pharmaceutical or dietary supplement composition for the treatment of steroid/nuclear (s/n) receptor-mediated physiological conditions.
6. The extract of claim 5, wherein the s/n receptor-mediated physiological condition is PPAR-mediated disease and is diabetes, cancer, polycystic ovarian disease, inflammatory bowel disease, dyslipidaemia, atherosclerosis, coronary heart disease or obesity.
7. The extract of claim 5, wherein the composition further comprises at least one pharmaceutically acceptable carrier and/or diluent.
8. The extract of claim 5, wherein the composition comprises an effective amount of 1 to 1000 µg/mL of extract for the treatment of PPAR γ -mediated physiological conditions.

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9. The extract of claim 5, wherein the composition comprises an effective amount of 1 to 1000 $\mu\text{g/mL}$ of extract for the treatment of PPAR α -mediated physiological conditions.
- 5 10. The extract of claim 3, wherein the composition is present in a food product or beverage.
11. The extract of claim 3, wherein the composition is present in a commercial package, and wherein the package includes instructions for use.
- 10 12. A method for the treatment of s/n receptor-mediated physiological conditions comprising administering to a subject an effective amount of at least one extract selected from the group consisting of:
- 15 a hexane extract of Astragalus membranaceus (HQ); a dichloromethane extract of Astragalus membranaceus (HQ); a chloroform extract of Astragalus membranaceus (HQ); and a non-aqueous extract of Astragalus membranaceus provided that the HQ extract is not an ethanol or butanol HQ extract.
- 20 13. The method of claim 12, wherein comprising treating the subject with 5 to 5000 mg of extract for the treatment of PPAR α -mediated physiological conditions.
- 25 14. The method of claim 12, wherein comprising treating the subject with 5 to 5000 mg of extract for the treatment of PPAR γ -mediated physiological conditions.

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15. The method of claim 12, wherein comprising treating the subject with 1 to 1000 µg of extract per mL of blood volume for the treatment of PPAR α -mediated physiological conditions.
- 5 16. The method of claim 12, wherein comprising treating the subject with 1 to 1000 µg of extract per mL of blood volume for the treatment of PPAR γ -mediated physiological conditions.
- 10 17. The method of claim 12, wherein the steroid/nuclear (s/n) receptor-mediated physiological conditions is PPAR-mediated physiological condition and is diabetes, cancer, polycystic ovarian disease, or inflammatory bowel disease.
- 15 18. The method of claim 12, wherein the steroid/nuclear (s/n) receptor-mediated physiological condition is PPAR-mediated physiological conditions and are dyslipidaemia, atherosclerosis, coronary heart disease or obesity.
- 20 19. A method for the treatment PPAR-mediated physiological conditions comprising administering to a subject an effective amount of calycosin and/or formononetin, provided that the treatment of cancer of prostate and breast is excluded.
- 25 20. The method of claim 19, wherein the PPAR-mediated physiological condition and is diabetes, atherosclerosis, inflammatory bowel disease, polycystic ovarian disease, obesity, dyslipidaemia and/or the cancer of colon.

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21.A method for augmenting or synergising the activity of ligands of steroid/nuclear receptors comprising administering to a subject an effective amount of at least one of:

an extract of *Astragalus membranaceus* (HQ);

5 a flavonoid compound; and

a pharmaceutical or dietary supplement composition comprising an effective amount of an extract of *Astragalus membranaceus* or a flavonoid compound;

in the presence of at least one ligand of steroid/nuclear receptors.

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22.The method of claim 21, wherein the pharmaceutical or dietary supplement composition comprises an effective amount of at least one extract selected from the group consisting of: a hexane extract of *Astragalus membranaceus* (HQ); a dichloromethane extract of *Astragalus membranaceus* (HQ); a chloroform extract of *Astragalus membranaceus* (HQ); and a non-aqueous extract of *Astragalus membranaceus* (HQ) provided that the HQ extract is not an ethanol or butanol HQ extract

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23.The method of claim 21, wherein the ligand is a PPAR ligand.

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24.The method of claim 21, wherein the ligand is an anti-diabetic or hypolipidaemic drug.

25.The method of claim 21, wherein the ligand is a hormone.

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26.The method of claim 25, wherein the hormone is androgen, progestogen or glucocorticoid.

27.The method of claim 21, wherein:

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- 5 a) the ligand is androgen and the subject is or is not under disease or condition of male infertility, chronic bone and muscle mass loss, geriatric andropause, androgen insensitivity syndromes, klinefelter syndrome or cryptorchidism;
- 10 b) the ligand is progestogen and the subject is or is not under disease or condition of postmenopausal hormone replacement therapy, female infertility, endometrial cancer, secondary amenorrhea, functional uterine bleeding or menstrual disorders; or
- 15 c) the ligand is glucocorticoid and the subject is or is not under disease or condition of autoimmune diseases, arthritis, post-operative graft rejection or asthma.
28. The method according to claim 21, wherein the flavonoid compound is calycosin, formononetin, genistein or daidzein.
- 20 29. The method according to claim 21, wherein the method is for the treatment of PPAR γ -mediated conditions selected from the group consisting of: diabetes, atherosclerosis, polycystic ovarian disease, hormone-dependent cancer of the breast, colon or prostate, or inflammatory bowel disease.
- 25 30. The extract of claim 1, which prepared by treating Astragalus membranaceus plant or part of the plant with hexane, dichloromethane and/or chloroform.

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31. A method for screening and/or discovering compounds or extracts capable of augmenting or synergising the activity of ligands of steroid/nuclear receptors comprising;

5 contacting or mixing a compound or extract to a composition comprising at least one ligand of steroid/nuclear receptors, and
determining the augment or synergism of the activity of the ligand.

10 32. The method of claim 31, wherein the ligand is bound to a pocket of the steroid/nuclear receptors and the compound or extract does not bind specifically to the ligand-binding pocket of the steroid/nuclear receptor.

33. The method of claim 31, wherein the ligand is an endogenous androgen, progestogen, glucocorticoid and/or a PPAR agonist.

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